

Notice of Allowability

Application No.

10/046,443

Examiner

Adam R. Giesy

Applicant(s)

RAESE, J. CRAIG

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/14/2006.
2. ☒ The allowed claim(s) is/are 10,11,13 and 14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance:

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 10, 11, 13, and 14 are allowed over prior art of record.

Independent claims 10 and 14 are allowed since the claims recite a storage device comprising: an electron emitter; a lens to adjust the focal length of the beam emitted from the emitter; a sensing switch coupled to the electron emitter to sense the voltage on the electron emitter, an amplifier coupled to the sensing switch and the lens, wherein the amplifier drives the voltage on the lens; and further comprising: a compensating diode coupled to the sensing diode and the amplifier, wherein the compensating diode compensates for a voltage drop across the sensing diode, and a bias resistor coupled to an amplifier side of the compensating diode and ground.

Claim 11 is allowed as being dependent upon the aforementioned independent claim 10.

Independent claim 13 is allowed since the claim recites a storage device comprising: an electron emitter; a lens to adjust the focal length of the beam emitted from the emitter; a sensing switch coupled to the electron emitter to sense the voltage on the electron emitter, an amplifier coupled to the sensing switch and the lens, wherein

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the amplifier drives the voltage on the lens; and further comprising a plurality of additional sensing diodes coupled to the input of the amplifier and other electron emitters.

The closest prior art by Pfeiffer (US Pat. No. 4,423,305) discloses an electron beam emitter with several lenses and several sets of electrostatic deflection plates. Pfeiffer discloses that the plates are used to guide the electron beam through the lenses to the target. Pfeiffer does not disclose that the plates sense voltage that can be used to drive the lens voltage for focusing the lens. Pfeiffer also does not disclose a compensation diode or a biasing resistor.

The other closest art by Gibson et al. (US Pat. No. 5,557,596) discloses an atomic storage medium which includes an electron beam emitter, and electrostatic deflection electrodes. Gibson, however applies a voltage to the medium in order to guide the electron beam to its destination. Gibson does not mention a lens, sensing diodes or switches, or an amplifier that drives the lens voltage based on the sensing diode.

Conclusion

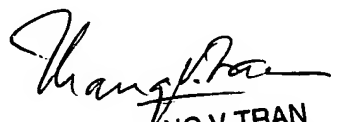
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARG 6/21/2006



THANG V. TRAN
PRIMARY EXAMINER